BEHAVIOURAL FINANCE FACTORS AFFECTING INVESTMENT PERFORMANCE BY RETAIL INVESTORS IN THE NAIROBI SECURITIES EXCHANGE

BY

FILBERT CALIST CHAMI
ADM: 645520

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STUDENT’S DECLARATION

I declare that this project is my original work and has not been presented in any other university or institution for academic credits other than United States International University – Africa.

…………………….. Date …………………..  
Filbert Calist Chami,  
Reg. No 645520.

SUPERVISOR

This research project has been submitted with my approval as the university’s supervisor.

…………………….. Date …………………..  
Francis Gatumo,  
Chandaria School of Business.

…………………….. Date …………………..  
Dean, Chandaria School of Business.
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To all my friends, who were a constant source of motivation and for their never ending support and encouragement during this program, I am very fortunate to have shared this milestone and journey with talented and all rounded individuals.

May God bless you all.
DEDICATION

This project is dedicated to my Family. Your support and encouragement during my studies enabled me to complete this project.
ABSTRACT

Although finance has been studied for thousands years, behavioral finance which considers the human behaviors in finance is a quite new area. Behavioral finance theories, which are based on the psychology, attempt to understand how emotions and cognitive errors influence individual investors’ behaviors (investors mentioned in this study are referred to individual investors). The study sought to answer the following questions: What are the behavioral factors influencing individual investors’ decisions at the NSE and which factors do they belong to? How do the behavioral factors influence the individual investor’s decisions at the NSE? How do the behavioral factors influence the investment performance of individual investors at the NSE? The main objective of this study is exploring the behavioral factors influencing individual investors’ decisions and consequential effect on the investment performance at the Nairobi Securities Exchange.

To meet the objectives of the study, a Causal survey design was chosen. Primary data was collected using self-administered drop and pick questionnaires. Cronbach's Alpha Test was used to test the internal consistency reliability of measurements, which are in formats of continuous variables 6-point Likert measurements. The research identified 98 potential respondents who agreed to take part in the study. 86 respondents filled the questionnaires in time for data analysis, which represented an 88% response rate. The study makes a finding that, the education is a critical factor that yields significant influence on the success of retail investors. The study makes a finding that, the average estimate for work experience among many traders at the NSE, is 10 years (The range 5 – 10 years).

The study established that retail investors make a critical evaluation of the market fundamentals before making an investment decision, which registered a mean of 5.40, with standard deviation of 0.538, and variance of 0.259 which indicates that, the respondents were highly in agreement that, stock traders tap into the market fundamentals of underlying stocks before making investment decisions. The study established that the other investor factor on the stock choice was highly influential on the retail trader’s investment decisions, recording an average mean of 4.76, with a standard deviation of 0.936 and variance of 0.869. The study makes a finding that the most significant effect of behavioral factors is the cautionary approach gained by retail traders on price fluctuations with an average mean of 5.35. The
study makes a finding that, there exists a positive correlation between market behavioral factors and the performance of stock investments, recording a p-value of 0.000, at significance level ,0.01 and an $R^2$ value of 0.491. The study finally makes a finding that, there exists a significant positive association between individual finance behavioral factors and the performance of stock investments with a p-value of 0.000 at significance level 0.01, and an $R^2$ value of 0.372.

The study concludes that the stock trader makes a comparative analysis on the all the critical factors that have direct correlation between the performance potential of a stock and the prevailing market condition such as market liquidity and the stability of the macroeconomic environment. The study concludes that inexperienced traders are more likely to seek investment advice from friends and relatives whereas the experienced traders would rely with market fundamental factors and information on particular stock. The study concludes that, there is direct correlation between behavioral factors and the returns on stock investments.

The study recommends that investors adopt a broad information use in making investment decisions at the capital markets. The study recommends that individual investors should seek insights into technical data provided by companies listed at the NSE. The study recommends that investment managers at investment firms pursue initiatives to encourage traders to diversify their portfolios as a strategy of tackling the uncertainties that encompass local listed companies.
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<td>Hyper Text Transfer Protocol</td>
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<tr>
<td>ICT</td>
<td>Information Communication and Technology</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<td>KAM</td>
<td>Kenya Association of Manufacturers</td>
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<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
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<td>NASDAQ</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Securities market is a unique market place, where securities are bought and sold, (Zuravicky, 2005). In an economy, besides playing the role of a source for financing investment, securities market also performs a function as a signaling mechanism to managers regarding investment decisions, and a catalyst for corporate governance (Samuel, 1996). Furthermore, securities market forms the most effective channel for business organizations to raise capital, (Zuravicky, 2005). According to Teweles & Bradley, (1998) potential investors at the securities market, are driven by the prospects of long-term capital, dividends, and a hedge against the inflationary erosion of purchasing power. Jaswani (2008) suggested that securities liquidity factor made securities the most lucrative form of investment. Investors would opt to invest in securities since they are driven by the passion to become owners of the firm, from where they accrue benefits such as payments of dividends and returns for the increase in stock price (Patricia & Oluwatobi, 2005). However, many people buy securities for the purpose of control over the firms. Traditionally, company shareholders often make priority to own specific amount of shares so that they can join the board of directors hence able to participate in the making strategic corporate decisions and set directions for the firm (Smith, 2004).

Historical evidence, show that financial operations related to securities market existed in the ancient civilization (Jaswani, 2008). The Romans are credited to be the pioneers of corporate organizations development, by raising capital through the sale of shares to the public and also participating in the bidding for government tenders (Sobel, 2000; Smith, 2004). Historical data show that, the off trading center in Rome was located near the Temple of Castor, which was popularly known as the Forum (Smith, 2004). The Forum was a theater which an array of activities, other than securities exchange the forum also allowed trading of bonds and commercial transactions in the selling and exchange of goods and services (Smith, 2004). By around 1000, numerous share-holding firms across the continental Europe resembled the old Roman companies, even though evidence indicates that sole proprietorship was the most preferred (Sobel, 2000). Through the 15th century, a group of first brokers appeared (Sobel, 2000). During this period, Rialto Bridge of Venice formed the business center for Europe (Sobel, 2000). The sixteenth, seventeenth and eighteenth century formed the period through
which commercial revolution was witnessed characterized by the boom and bust in hundreds of joint-securities ventures (Sobel, 2000). Trading in Europe commenced in an active market that was held in Antwerp and then followed by Amsterdam in the sixteenth century, which was regarded as the financial center of northern Europe (Smith, 2004). London Securities Exchange was incepted in 1801 by brokers and dealers (Smith, 2004). In the United States, the first trading activities involved trading slaves and corn around the year 1752, which then preceded the formation of a formal market at the Broad Street and later in Fraunces Tavern, (Sobel, 2000).

There exists three classifications of modern-day securities markets that include, the developed (such as the USA, the UK, Japan, and the EU), emerging markets (such as Mexico, China, India…) and the frontier or reemerging (such as Vietnam, Estonia, Kenya…) based on the quality of markets criteria (FTSE, 2011). The USA being the world’s largest economy, wields strong influence on the global security markets (Reza, Zamri&Tajul, 2009). Reza, et al. (2009) explained that, Asian securities markets of reciprocate the New York index daily, underscoring the influence of American securities market in the world. Patricia and Oluwatobi (2005) explained that major securities markets, for instance that of US, the UK and the EU, are converging at least over the long-term period, although, the US and the UK securities markets seem to be less bound to a common trend. This shows that, there exists level of complementary shifts in both ends of securities markets, indicating levels of relative dependence across markets (Patricia &Oluwatobi, 2005). Additionally, global issues including; terrorism, energy crisis and natural calamities have had significant influence on the volatility of securities markets in numerous countries, such as Japan, USA and the UK (Fernandez, 2006).

The securities market forms a great benchmark that can be used as a yardstick for economic strength and development (Patricia &Oluwatobi, 2005; Fernandez, 2006). This indicates that, the trends in the securities market can serve as a good pointer to the economic health of an economy. Positive shifts in share price tend to be linked with increased investments, which contribute to enhanced growth rate of the firm and the economy in general (Jaswani, 2008). According to Levine and Zervos (1996), the securities market affects general economy through its liquidity. There is of often a state of market skepticism, where the firms require the guarantees for long-term capital, whereas the current investors wouldn’t want to relinquish control (Levine &Zervos, 1996).
Liquidity often gives the investors an opportunity to trade securities more easily and quickly whereas at the same time, firms access capital for stable development (Levine & Zervos, 1996; Levine, 1991; Bencivenga, Smith & Starr, 1996). Additionally, by exploring risk diversification, the securities market, has the potentially to influence economic growth, by expanding investments towards higher-return projects (Levine & Zervos, 1996; Saint-Paul, 1992; Devereux & Smith, 1994).

Obstfeld (1994) explained that the securities market plays a big role in promoting the acquisition of vital firms’ information, from which the investors could benefit from, this is before the information is shared widely and triggers price changes. Therefore it’s fundamental that investors initiate personal driven research to monitor firms closely (Levine & Zervos, 1996; Grossman & Stiglitz, 1980; Holdmstrom & Tirole, 1993). Additionally, securities market has the capacity to rally for national economic development through effective redistribution and use of available resources (Supat, 1998). Through securities market, savings flow from investors to the production of goods and services. Moreover, securities market enable the investment agents rearrange their portfolios much faster (O'Donnell, 2002). Thus, the importance and influence of securities market on the development of an economy cannot be denied.

A number of scholar’s appreciate behavioral finance as a great theory to understand and explain feelings and cognitive errors affecting investment decision-making (Waweru, Munyoki & Uliana, 2008).

Backers of the behavioral finance theory are of the perception that, social sciences such as Psychology, contribute in indentifying of securities markets behaviors, market crashes and market bubbles (Gao & Schmidt, 2005). There are two reasons why behavioral finance is important and interesting to be applied for Nairobi securities market. First, the concept of behavioral finance is still a fresh topic being studied. Up until some few years ago, it was acceptable; to study the thought process of individual investors at the financial markets and how they made investment decisions, which then impacted the reaction of the financial markets (Kim & Nofsinger, 2008). Secondly, there exists evidence (subjective, academic, and experimental), which has concluded that, investors from African economies such as Kenya, often suffer from cognitive biases, way more than any other regions (Kim & Nofsinger, 2008).
Thus, while assessing the fundamental factors which influence the investment decisions by Kenyan investors, it’s important to identify behavioral elements. Existing studies on behavioral financiers have been largely undertaken in developed economies across European and North American markets (Caparrelli, Arcangelis & Cassuto, 2004; Fogel & Berry, 2006). There have been a number of similar studies in emerging markets as well such as in Malaysia and Kenya (Low & Ghazali, 2007; Waweru et al, 2008). However, existing studies exploring on the subject of behavioral finance across frontier and emerging markets are much fewer than for developed markets. In this study, behavioral finance was narrowed down to the Kenyan securities market, a pre-emerging securities market of Eastern Africa region, to identify the critical factors of individual investors’ behavior.

Kenya is an emerging economy in Africa which shares numerous cultural characteristics which are same across many African countries. This section explores the subject of behavioral finance in Africa, its importance and how it’s critical in the Kenyan context as well. As the different, levels of knowledge and experience leads to the diverse approach to thought-cycles, thus Africa forms an important areas to evaluate behavioral finance. According to Kim and Nofsinger (2008), Africans are largely inclined towards cognitive biases more than Western people do and for that most of the African individual investors are considered to be mere gamblers. Theoretically, social scientists and psychologists widely link this inclination towards behavioral biases as outcomes nurtured by culture although the levels may vary (Low & Ghazali, 2007).

Even though there is existence of literature on behavioral biases, exploring on the comparisons between African people and Western people, the literature is still limited (Kim & Nofsinger, 2008). According to Weber and Hsee (2000) the bottom line is that the topic of culture and decision making has not received much attention from either decision researchers or cross-cultural psychologists. Although the subject of behavioral finance is still considered a controversial topic, today financial analysts have better tools to understand the psychology driving human behaviors, and it is accepted that these behaviors can influence financial decision-making. Many researchers also agree that arbitrage is limited, Shleifer and Vishny (1997), hence, these behaviors can affect prices. Whereas, researches in behavioral finance have enhanced the knowledge of financial markets, it is more promising in the future. Recently,
sessions on behavioral finance in finance conferences seems to have more attendants who are usually the young scholars of the academic profession, Kim & Nofsinger (2008).

### 1.2 Problem Statement

Due to the positive correlation between securities market and economy, the rise of securities market will positively affect the development of the economy and vice versa. This means that the investment decisions made by investors at the securities market wield significant influence on the market trends, which consequently influences the economy (Allen & Evans, 2005). Over the last decade, the Nairobi Securities Exchange has recorded a 120% increase in the volume of retail investors largely due to the introduction of IPOs of profitable companies (NSE, 2016). A number of these investors do not make calculated decisions; instead they chose to rely on a combination of behavioral factors to base their investment decisions. The reliance on these behavioral factors is the contributor to the skewed performance of investments as investors make uninformed decisions. This will lead to dilution of prices for the listed companies and losses to the investors, Raichura (2010).

Consequently, this study identified which behavioral factors influence the decisions of individual investors at the Nairobi Securities Exchange (NSE) and deduce the impact levels these factors have on the decisions taken by the investors and the consequence of those decisions on investment performance.

### 1.3 Purpose of Study

The purpose of this study was to establish the impact of behavioral factors on individual investors’ decisions at the NSE and their consequential impact on investment performance.

### 1.4 Research Questions

To help us achieve this main purpose, the research answered the following research questions:
1.4.1. What are the behavioral factors influencing retail investors’ decisions at the NSE?

1.4.2. How do the behavioral factors influence the retail investor’s decisions at the NSE?

1.4.3. How do the behavioral factors influence the investment performance of retail investors at the NSE?

1.5 Significance of Study

1.5.1 Retail Investors: The research is a good reference of securities-investment behavior for the investors to consider and analyze the securities market trend before making suitable decisions of investment.

1.5.2 Investment Firms: The research provides them with a good background for their prediction of future securities-market trend and giving more reliable consultant information to the investors.

1.5.3 Academia: The concepts of behavioral finance are relatively new in comparison to other financial theories. In developed security markets, behavioral finance is applied widely to explore the behaviors that impact the investment decisions; however, as mentioned above, behavioral finance has the limited number of application for less developed security markets. This study is done with hope to confirm the suitability of using behavioral finance for all kinds of securities markets.

1.5.4 Capital Markets Authority (CMA) / NSE: This study will help in enacting well designed strategies on the efficient operation and management of the stock market in Kenya as this will bring the behavioral perspective in view in decisions on trading of securities.

1.5.5 Underwriters/Stock Brokers: It will be an eye-opener and provide guidelines on effect of behavioral bias on trading activities and to understand the market dynamics and look more closely at factors other than price that influence the performance of the securities in the market and how to deal with newly traded securities.

1.6 Scope of study
The study focused on the NSE investors in the securities counter, as provided by the twenty registered security firms operating within Nairobi County, who appeared in their registers and data bases as at the time of the study. It focused on their securities investment decisions that they made in the last five years with regard to the application of behavioral finance. The study targeted the 4,400 registered individual retail investors at the NSE. Using the
Yamane formula for sample size determination, the study settled for a sample size of 98 respondents. The study was carried out in the months of May and June 2017.

1.7 Definition of terms

1.7.1 Behavioral Finance Factors – these are psychological factors that influence financial decision making process (Caparelli et al., 2004).

1.7.2 Securities Investment Decisions – investment decisions on which securities to buy, hold or sell on the Nairobi Securities Exchange by investors (Sobel, 2000).

1.7.3 Heuristics - Heuristics are defined as the rules of thumb, which make decision making easier, especially in complex and uncertain environments by reducing the complexity of assessing probabilities and predicting values to simpler judgments. There are four components of heuristics: representativeness, availability bias, anchoring, and overconfidence (Levine, 1991).

1.7.4 Prospect - Prospect theory focuses on subjective decision-making influenced by the investors’ value system. Prospect theory describes some states of mind affecting an individual’s decision-making processes including: regret aversion, loss aversion, and mental accounting (Fernandez, 2006).

1.7.5 Market - Financial markets can be affected by investors’ behaviors in the way of behavioral finance. If the perspectives of behavioral finance are correct, it is believed that the investors may have over- or under-reaction to price changes or news; extrapolation of past trends into the future; a lack of attention to fundamentals underlying a securities; the focus on popular securities and seasonal price cycles (Smith, 2004).

1.7.6 Herding - Herding effect in financial market is identified as tendency of investors’ behaviors to follow the others’ actions. In the perspective of behavior, herding can cause some emotional biases, including conformity, congruity and cognitive conflict, the home bias and gossip. Investors may prefer herding if they believe that herding can help them to extract useful and reliable information (Jaswani, 2008).

1.7.7 Investment Performance – This study sought the investors to assess their own investment performance. In more details, the return rate of securities investment was evaluated by asking investors to compare their current real return rates to both their own expected return rates and the average return rate of the security market. Besides,
the satisfaction level of investment decisions is proposed in this research as a criterion to measure the investment performance.

1.8 Chapter Summary
This chapter covers the background of the study, highlights the problem statement and the general objective. It states the research questions and the significance of the study. It also deals with the scope of the study and definition of terms used throughout the study. The next chapter deals with Literature Review.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This Chapter aims at reviewing the related literatures of behavioral finance. Firstly, an understanding of the behavioral factors that are likely to affect investors in the NSE, presented as a comparison between traditional finance and behavioral finance as well as behavioral finance in Africa. Secondly, the important theories of behavioral finance (heuristic, prospect, market, and herding) are included to have an overall picture of the investment decisions and performance that follows. Finally, an introduction to the next chapter where a research model with hypotheses is proposed to follow during the research.

2.2 Behavioral factors influencing retail investors at the NSE
Behavioral finance considers how various psychological traits affect how individuals or groups act as investors, analysts and portfolio managers (Brown & Reilly, 2009). They noted that behavioral finance advocates recognize that the standard finance model of rational behavior and profit maximization can be true within specific boundaries’ but they assert that it is an incomplete model since it does not consider individual behavior. According to Barberis & Thaler (2003), some financial phenomena can be better explained using models which recognizes that some investors are not fully rational or realize that it is not possible for arbitrages to offset all instances of mispricing.

A study by Brown (1999) examined the effect of noise traders on the volatility of closed-end mutual funds. At the time when there is a change in mood, these traders move together which increases the prices and the volatility of these securities during trading hours. A number of these traders hold the belief that any success is due to their talents and failure is due to “bad luck”. This is what Gervais and Odean (2001) referred to as self-attribution which causes them to overestimate their talents. There are numerous theories that explain behavior concept of irrationality.

2.2.1 Prospect Theory
The Prospect theory, which was developed by Kahneman and Tversky in 1979. The theory, describes how people frame and value decisions involving uncertainty by looking at choices in terms of potential gains or losses in relation to a specific reference point which is often the
purchase price. According to Ritter (2003), prospect theory is a descriptive theory under uncertainty which is centralized in the shifts in wealth equation. It is considered to be a deviation from the expected utility theory which focuses on the level of wealth. Kahneman and Tversky (1979) argued that securities investors evaluate gains/losses according to an S-shaped utility function. In a study by Laver (1997), found that the decision making process is way off, what could be considered as a rational process and that people are more inclined to pursue risks to avoid losses other than to achieve higher returns. Prospect theory adopts cognitive psychological techniques to argue numerous documented differences in economic decision making from neo-classical theory. Kahneman and Tversky (1979) explained that traditionally individuals are risk lovers for losses. The utility function is concave for gains meaning that people feel good when they gain, but twice the gain does not make them feel twice as good. The utility function is a factor for loss meaning that people experience pain when they lose, but twice the loss does not mean twice the pain.

According to Kahneman&Tversky (1979), the most important implication of prospect theory is that the way economic agents subjectively frame an outcome or transaction in their mind affects their level of satisfaction derived from the returns. Prospect theory appraises three emotional biases that impact on investors’ decision-making processes including loss/ regret aversion, cognitive dissonance and mental accounting. Loss and regret aversion are often the underlying motivations for what appears to be irrational investment behavior, Gounaris&Prout (2009). Kahneman and Tversky (1979) sought to pitch a framework that explains how decision makers react when faced with options under uncertainty. Regret is regarded as a strong emotional state, which is related information about the past regarding a decision in the past leading to a worse result than an alternative decision or than a decision of someone else (Sevil, Sen & Yalama, 2007). The investors avoiding the pain of regret would tend to decrease their share of personal responsibility in their investment decisions (Sevil et al, 2007). Empirical evidence shows that losses are weighted about twice as heavily as gains-losing $1 is about twice as painful as the pleasure of gaining $1 (Johnson, Lindblom&Platan, 2002). In an effort to avoid the pain of regret, majority of investors prefer to decrease their share of self responsibility in their investment decisions. This can also be expressed as the phenomena in which people will tend to gamble in losses, that is, traders will tend to hold on to losing positions in the hope that prices will eventually be rewarding.
Gounaris & Prout (2009) argued that as financial professionals rebuild client trust in the face of uncertainty and skepticism, loss aversion is likely to play a prominent role in the dialogue and subsequent decisions. Regret theory is said to explain the fact that investors defer selling securities which have dived in preference to fast-tracking the trading of securities that have gone up in value. Cognitive dissonance is said to be the mental conflict that people often experience when they are faced with evidence that their beliefs or assumptions are wrong (Ritter, 2003). The concept relates to the psychological conflict derived from the incongruous beliefs and attitudes held simultaneously. It can be classified as a sort of pain of regret triggered by wrong beliefs. This concept was introduced by psychologist Leon Festinger in the late 1950s. He and other researchers showed that when confronted with challenging new information most people seek to preserve their current understanding of the world by rejecting or avoiding the new information or by convincing themselves that no conflict really existed (Smith, 2004). Since individual investors are skeptical in altering their decisions, they convince self that they have settled for rational decisions (Low & Ghazali, 2007). According to mental accounting theory, which was pioneered by Thaler in 1980, posits that people prefer to separate their current and future assets into distinct non-transferable parts. It purports that individuals assign different levels of utility to each asset group, which affects their consumption decisions and other behaviors.

According to Shiller (1997), the concept of mental accounting explains the tendency of people to place certain events into different mental accounts based on mythical attributes. Mental accounting affects not only does it affects their independent finances but is common phenomenon in the complex world of investment. Investors in most situations try to stagger the sale of winners over time to prolong the favorable experience and they often have an irrational preference for securities paying high dividends because they don’t mind spending the dividend income, but are not inclined to sell a few shares and dip into the capital. People may tend to place their investments into arbitrarily separate mental compartments, and react separately to the investments based on which compartment they are in. When interaction among assets in different accounts are overlooked, this mental process can adversely affect investor wealth (Chandra, 2008).
2.2.2 Heuristic Theory

Heuristics, which expresses that individuals have tendency to make judgments quickly, are simplifying strategies used to approach complex problems and limit 15 explanatory information. The concept was pitched by heuristics scholars, Kahneman&Tversky in the year 1974. Individual investors have a habit of making decisions by the approach of trial and error method where end-up creating some rules of thumb. To an extent, the individual investors make hasty investment decisions which bears possible factors of resulting in two scenarios ending up either favorable or unfavorable outcomes. The interpretation of new information may require heuristic decision-making rules, which might later have to be considered (Johnson, Simmons, LeBoeuf& Nelsons, 2002). In the context of heuristics approach, about six behavioral biases can be identified, which are notably; Herd behavior, Overconfidence, Representativeness, Self-attribution, Belief perseverance and Anchoring (Johns et al., 2002).

Herd behavior is a form of heuristics where individuals are led to conform to the majority of individuals present in the decision-making environment, by following their decisions. According to Gounaris&Prout (2009), people are deeply social beings, reliant on each other for existence. Gounaris and Prout, argue that people make decisions especially when they feel unsure or threatened, they watch what others do and then copy them. This approach is highly misleading in the context of investment decisions. Shiller (2000) explained that in everyday life we have learned that when a large group of people is unanimous in its judgments they are certainly right. People are influenced by their social environment and they are often pressured to conform e.g. lifestyle and fashion is forms of herd behavior that people are always pressured to conform to or copy. The primary concept with regard to the human society is that people who communicate regularly with one another have a tendency to think the same (Johnson et al. 2002). Across situations and cultures, psychologists have found that humans employ such social comparisons to inform their beliefs and decisions even when it contradicts facts or their better judgment (Gounaris&Prout, 2009). For instance, people of same age, gender, experience, education and peer may exhibit similar pattern of making investment decisions generally.

Representativeness is a situation whereby investors rely on a best-fit approximation to determine which category should provide a frame of reference from which to understand the new information. In the context of securities market, it highly likely that investors could
classify some securities as growth securities based on a history of consistent earnings, ignoring the likelihood that there are very few companies that will keep growing (Johnson et al. 2002). Raines and Leather (2011) posits that the ability to infer numerical predictions on the values of securities that is representative of the descriptions of the companies but ignoring the reliability of those descriptions results in overreliance on stereotypes and the underweighting of base rate information. According to Kahneman&Tversky (1974), people prefer to categorize events as exact inference of a well-known state and then, in making probability forecasts to overstress the importance of such categorization disregarding evidence of the underlying probabilities. Agrawal (2012) explained that, in the situation where people are under the influence of the representativeness bias, events are organized in a way of being representative of a well-known class. The result of such a tendency is that probability estimates are made in a way that overemphasizes the significance of the categorization without adequate attention to the evidence about the underlying probabilities.

Bearing strong sense of belief has the ability to make an individual overestimate their abilities or overestimates an outcome of a process or event. Johnson et al. (2002) explained that overconfident investors, that believe in precision of individual capacity about the value of a security is greater than it actually are found to trade more than rational investors and that doing so lowers their expected utilities. The combination of overconfidence and optimism causes people to overestimate the reliability of their knowledge, underestimate risks and exaggerate their ability to control events, which leads to excessive trading volume and 17 speculative bubbles, Johnson et al. (2002). Barberis& Shleifer (2003) explained that the drive by investors to heuristically arrange objects can potentially lead to the emergence of styled-based mutual funds.

Doukas&Petmezas (2005) highlight the brilliance for self-attribution hypothesis in the market for corporate control. In an experimental context, Johnson et al. (2002) explained that people tend to show overboard confidence for individual judgements. Overconfidence can lead to illusion of control. Pompian (2012) posits that, illusion of control bias is a bias in which people tend to believe that they can control or influence outcomes when, in fact, they cannot. A review by the author indicated that choices, task familiarity, competition and active involvement can all inflate confidence and generate such illusions. This may lead investors to either trade more than is prudent or inadequately diversify portfolios, for instance, because of familiarity due to
having worked in the company. Another manifestation of overconfidence is self-attribution bias.

Pompian (2012) observed that, the ability of individuals to ascribe their successes to innate aspects such as talent or foresight, while more often blaming failures on outside influences such as bad luck. Therefore, self-attribution investors can, after a period of successful investing, believe that their success is due to their talents as investors rather than to factors out of their control and failure is due to “bad luck”. These groups of investors tend to believe that they can make good predictions based on the past events. Thus people view things that have already happened as being relatively predictable. According to Brown & Reilly (2009), the belief perseverance means that once people have formed opinion (on securities or a company) they stand their ground for much longer. This makes them very skeptical about it or even misinterprets such information. Anchoring is the basis for decision-making approach, through which about 18 quantitave assessments are required and where these assessments may be influenced by suggestions. People harbor mental reference points (anchors), for instance in the context of securities, the previous price. When they get new information they adjust this past reference insufficiently to the new information acquired, Johnson et al. (2002).

Raines & Leathers (2011) explain that anchoring occurs as investors assume that current prices are about right, putting too much weight on recent experiences. The tendency of the investor to use this anchor enforces the similarity of securities prices from one day to the next, Shiller (2000). Brown & Reilly (2009) argue that individuals facing anchoring bias when asked to estimate something, they start with an initial arbitrary (casual) value and then adjust away from it. The problem is that the adjustment is often insufficient. Anchoring is closely related to availability bias. At times, investors tend to be over-optimistic about outcomes. Optimism is about expecting a favorable outcome irrespective of the actual effort or skills devoted by the individual to bring about the outcome, Agrawal (2012). Ramnath, Rock & Shane, (2008) explain over optimism as the tendency to overvalue the possibility of desired outcomes and undervalue the occurrence of unfavorable events. The authors note that investors’ earnings forecast errors are significantly optimistic for buy recommendations and significantly pessimistic for sell recommendations.
Some of the primary determinants of investment decisions, and which can be measured, can be divided into three groups as follows: Prospect theory describes state of mind (emotional factors) affecting an individual’s decision-making processes including loss and regret aversion, cognitive dissonance, and mental accounting. The choice for an investment option is shaped by the nature of market prospects. Kahneman and Tversky (1979), argue that individuals frame and value decisions involving uncertainty by looking at choices in terms of potential gains or losses in relation to a specific reference point which is often the purchase price; and that investors are risk averse for gains and risk lovers for losses. Thus, emotional prospects of loss and regret aversion will factor in the decision on how, when, and where to invest. Heuristics are defined as the rules of thumb which make decision making easier especially in complex and uncertain environments, Ritter (2003) by reducing the complexity of assessing probabilities and predicting values to simpler judgments, Kahneman&Tversky (1974).

Five factors related to heuristics identified from the reviewed theories are: anchoring, availability bias, herding, overconfidence, and representativeness. These factors do impact on the volumes traded and how investment decisions are made. Lastly, market factors do influence investment decisions. Price changes, market information, past trends of securities, customer preferences, and fundamentals of underlying securities are market factors that influence decision making of investors, Waweru et al. (2008). They are external factors influencing investors’ behavior and therefore not part of behavioral factors. They affect both irrational and rational investors in different ways. 2.4 Empirical Review on Behavioral Influence This empirical review highlights the various types of behavioral biases underpinning investor decisions based on previous researches and literature.

Kahneman&Tversky (1979), present in Prospect Theory the following experimental evidence to illustrate how investors systematically violate the utility theory; when their respondents were asked to choose a lottery offering a 25% chance of winning 3,000 and a lottery offering a 20% chance of 4,000, 65% of their respondents chose the latter (20%; 4,000). On the contrary, when the respondents were asked to choose between a 100% chance of winning 3,000 and 80% chance of winning 4,000, 80% chose the former (100%; 3,000). Johnson, Lindblom, &Platan (2002) studied factors that influenced the speculative bubble during the period 1998 to March 2000. A survey of 160 private investors drawn from Aktiespararna Association in southern Sweden in Dec. 2001 and 47 institutional investors comprising of banks, mutual funds and
investment banks was conducted through questionnaire. The study concluded that herd instincts, cognitive dissonance, anchoring and loss aversion contributed significantly to the speculative bubbles as well as overconfidence.

Chandran (2008), performed an exploratory assessment on the behavioral factors and their impact on investors’ attitude towards risk and behavioral decision making processes. The study concluded that individual investors suffer from heuristics such as representativeness, overconfidence and anchoring, cognitive dissonance, greed and fear, loss and regret aversion and mental accounting within the prospect theory all influence investor’s perception of risk and subsequently his decision making. The author argues that because cognitive errors stem from faulty reasoning, better information, education and advice can often correct for them. Chandra and Sharma (2010), in their study of psychological biases that influence the individual investors’ behavior within Delhi and National Capital Region found that the individual investors’ behavior is driven by some psychological factors such as conservatism, under-confidence, opportunism, representativeness and informational inferiority complex.

A study by Brahmana, Hooy& Ahmad, (2012) on psychological factors on irrational decision making: case of day-of-the week anomaly (DOWA) and conceptualized a framework that linked the 21 psychological biases such as attention bias, heuristic bias, regret bias and cognitive bias to individual investor decisions. Waweru, Munyoki&Uliana (2008) assessed the role of behavioral finance and investor psychology in investment decision making at the NSE with special reference to institutional investors and concluded that behavioral factors do affect the decisions of the institutional investors operating at the NSE. Utilizing a control sample of about 23 institutional investors, their study concluded that behavioral factors affected the decisions of institutional investors at NSE. A survey by Kimani (2011) on behavioral factors influencing individual investors’ choices of securities at Nairobi Securities Exchanges show that there are five behavioral factors (Herding, Anchoring, overconfidence, Market and Prospect) at play. A study by Ngode (2012) on the effects of behavioral biases on the mutual fund choices showed that there are behavioral biases in mutual fund choices by investors in Kenya. The study involved 80 mutual fund investors randomly sampled from 16 licensed firms.
2.3 How behavioural factors influence retail investors decisions

2.3.1 Market Factors

Early studies have suggested that there exists a significant positive cross-sectional relationship between security Betas and expected returns, which directly supports the capital asset pricing model (CAPM) (Sharpe, 1964; Chandram & Sharma, 2010). However, Brown and Reilly (2009) contradict findings of CAPM by asserting that the relationship between expected returns and market beta is insignificant. According to Jaganathan and Wang (1996), they explained that there exists a relationship between conditional Beta and expected returns when the market is expanded to include human capital. However, the practical prices have always differed with any price predicted using any of the models recommended by conventional scholars. That market always reflect the behavioral bias of investors hence the difference in prices.

Kahneman and Tversky (1974) conducted a study where a wheel containing the numbers 1 through 100 was spun. The control subjects participating in the study were asked whether the percentage of U.N. membership accounted for by African countries was higher or lower than the number on the wheel. Afterward, the subjects were asked to give an actual estimate. Tversky and Kahneman, found a random anchoring value for the number on which the wheel 24 landed had a pronounced effect on the answer that the subjects gave. For instance, when the wheel landed on 10, the average estimate given by the subjects was 25%, whereas when the wheel landed on 60, the average estimate was 45%. The random number was found to have an anchoring effect on the subjects responses, pulling their estimates closer to the number they were just shown - even though the number had absolutely no correlation at all to the question. Haugen and Baker (1996) study concluded that, the strongest determining factors for the expected returns are past returns, trading volume and accounting ratios such as return on Equity and prices or Earning Ratio. They found no relationship between the risk measures such as systematic or total volatility and the material for the cross section or returns; however Baker et al (2004) argue that the negative relation between returns and past volume is driven by optimistic investors generating volume.

2.3.2 Over Confidence

The existing empirical frameworks forecast that overconfident investors will trade more than rational investors. Glaser and Weber (2003) carried out an empirical evaluation on
Overconfidence and Trading decisions. They directly tested this hypothesis by correlating individual overconfidence scores with several measures of trading volume of individual investors (number of trades, turnover). In the study, about 3000 online broker investors were asked to respond to an internet survey which was designed to measure various facets of overconfidence (miscalibration, the better than average effect, illusion of control, unrealistic optimism). The metrics of trading volume were calculated by the trades of 215 individual investors who answered the questionnaire. The study found that, the investors who thought that they are above average in terms of investment skills or past performance often trades much higher volumes more. They argued that their findings present a psychological foundation for the “differences of opinion” explanation of high levels of trading volume. In addition, their way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena drive economic behavior.

A study by Johnson, Lindbon and Platan (2002) on factors that influenced the speculative bubble during the 1998-2000 involved a survey of 160 private investors drawn from Aktiesprarna Association in South Sweden in December 2001 and 47 institutional investors comprising of banks, mutual funds and investments banks was conducted by use of a questionnaire. The study findings were that herd instincts, cognitive dissonance, anchoring and loss aversion contributed significantly to the speculative bubbles as well as overconfidence.

A research on Analysis of Auditors” Perceptions and Over-reliance on Negative Information by David (2002) found out that both in psychology and accounting indicates that humans, in making decisions, resort to using decision strategies known as heuristics. One heuristic of particular interest in the field of accounting is that of anchoring and adjustment. Empirical research has shown that subjects will sometimes have bias judgments towards the anchor even in situations where the anchor is of little value or is irrelevant. This explains that the presence of a primary or regency effect in the context of the anchoring and adjustment heuristic may be the existence of an “internal anchor”. Combining these theories hypothesizes that auditors would use their initial mindset as an anchor. A laboratory experiment indicated that auditors did employ the anchoring and adjustment heuristic; they did have a negative internal anchor; and the inertia effect could be used to predict whether a primary or regency effect would be
present in particular likelihood estimation. The results gave strong support for the idea that auditors place over-reliance on negative information. However, the results indicated that students did not have an internal anchor, did not employ the anchoring and adjustment heuristic and that the inertia effect was not useful in predicting whether a primary or regency effect would be present in particular likelihood estimation.

While Theoretical models predict that overconfident investors will trade more than rational investors, Glaser and Weber (2003) conducted an empirical study on Overconfidence and Trading Volume. They directly tested this hypothesis by correlating individual overconfidence scores with several measures of trading volume of individual investors (number of trades, turnover). Approximately 3000 online broker investors were asked to answer an internet questionnaire which was designed to measure various facets of overconfidence (miscalibration, the better than average effect, illusion of control, unrealistic optimism). The measures of trading volume were calculated by the trades of 215 individual investors who answered the questionnaire. They found that investors who think that they are above average in terms of investment skills or past performance trade more. Measures of miscalibration are, contrary to theory, unrelated to measures of trading volume. This result is striking as theoretical models that incorporate overconfident 27 investors mainly motivate this assumption by the calibration literature and model overconfidence as underestimation of the variance of signals. The results hold even when they controlled for several other determinants of investment decisions in a cross-sectional regression analysis.

In connection with other recent findings, the conclusion that the usual way of motivating and modeling overconfidence which is mainly based on the calibration literature has to be treated with caution. They argued that their findings present a psychological foundation for the “differences of opinion. In addition, their way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena drive economic behavior. Giridhari and Debasish (2011) studied that investors invest in different investment avenues for fulfilling financial, social and psychological need. The study involved a sample of 185 investors and was carried out in Central India between 2009- 2010.Findings were that while selecting any financial avenue they also expect other type of benefits like,
safety and security, getting periodic return or dividends, high capital gain, secured future, liquidity, easy purchase, tax benefit, meeting future contingency etc. A study by Leung and Tsang (2011) on anchoring and loss aversion in the housing market and the implications on price dynamics was carried out in Hong Kong. They used 28 housing transaction data provided by the Economic Property Research Center (EPRC) as their main source of data. The data set covered most of the housing transactions from 1992 to 2006 that contained many aspects of each transaction, including prices, gross and net area, address, floor, age, number of bedrooms and living rooms. 73,860 observations were the benchmark sample. They found out that Price dispersion and volume are procyclical (as positively correlated with the average house price). They observed that when the housing market was in a boom, a larger number of transactions and more disperse prices prevailed. That is, for two housing units with similar characteristics, they found them to have more diverse prices during the boom time if anchoring decreases over time. Using a sample of repeated sales, they show that both anchoring and loss aversion are present in the Hong Kong housing market. Knowing that both buyers and sellers are not rational, they proposed a simple model to show the impact of the two cognitive biases on house price dynamics. When both effects are present, both price dispersion and trade volume are positively correlated with the average house price. They also found out that a declining anchoring effect does relate to declining price dispersion and volume. They viewed their findings as supportive of an important role played by anchoring and loss aversion on the cyclicality of house prices.

2.3.3 Gamblers Fallacy
Wera (2006) conducted a survey on the influence of gamblers fallacy on investors at the NSE by targeting 100 individuals. The results found that majority of investors will gamble by holding the securities for a month with prospect of breaking even. A considerable 29 percentage chose to sell now to minimize losses, loss aversion. The preference for holding securities indicates that all investors are risk averse. Shikuku (2012) did a study to investigate the effect of behavioral factors on investment decision-making by unit trusts involved assessment of 11 registered unit trust companies in Kenya. Data was collected through a questionnaire. The study found out that, even though unit trusts are managed by experts their investment decisions are sometimes affected by emotional and psychological factors. Ngode (2012) in a study to determine the effect of behavioral biases on the mutual fund choices by
investors, anchored in four specific objectives. These included the effects of: the disposition effect behavior, the narrow framing behavior, the overconfidence behavior and the lottery securities preference behavior on investor’s mutual fund choices. The study used descriptive researches that employed a case study research design and targeted a population of all mutual fund investors in the 16 licensed mutual fund operators in Kenya. A random sample of 80 investors from the 16 licensed firms was picked for the study. Primary data was collected through questionnaires while correlation was used to analyze the degree of relationship between the variables in the study. Regression was used to determine the type of relationship. The study presents evidence of the existence of behavioral biases of mutual fund choices by investors in Kenya. It also found out that investors exhibit a positive bias, consistent with earlier studies carried on the same subject.

2.4 How behavioral factors influence the investment performance of retail investors

This empirical review highlights the various types of behavioral biases underpinning investor decisions based on previous research and literature. Existing literature classifies behavioral biases into two major types. These are: cognitive biases and emotional biases. Razek (2011) portends that human beings are faced with limited cognitive abilities that constrain their problem-solving abilities. According to Pompian (2012), cognitive errors or biases stem from basic statistical, information processing, or memory errors and thus, may be considered the result of faulty reasoning. Cognitive errors do not result from emotional or other predispositions towards certain judgments, but rather from either subconscious mental procedures for processing information or irrational perseverance in one’s own beliefs. The author argues that because cognitive errors stem from faulty reasoning, better information, education and advice can often correct for them.

Lindblom & Platan (2002) studied factors that influence the speculative bubble during the period 1998 to March 2000. A survey of 160 private investors drawn from Aktiespararna Association in Southern Sweden in Dec. 2001 and 47 institutional investors comprising of banks, mutual funds and investment banks was conducted through questionnaire. The study concluded that herd instincts, cognitive dissonance, anchoring and loss aversion contributed significantly to the speculative bubbles as well as overconfidence. Huberman (2011) showed that investors have localized preferences for securities by documenting their preferences for holding securities in a regional company in preference to other investments.
Grinblatt & Keloharju (2001) note that Finnish agents are more prone to hold securities in firms which are located closer to the investor. Coval & Markowitz (1999) show that the above preference for local securities extends to mutual fund managers in the sense that such managers tend to show a proclivity for securities headquartered in the region that the managers are based.

Hong et al. (2004) observes that securities market participation is influenced by social interaction i.e. agents that are more social in the sense of interacting more with peers at collective gathering such as church are more likely to invest in the securities market. Benartzi & Thaler (2001) show evidence of clearly irrational investor behavior where investors follow “1/n” allocation rule across investment choices regardless of the securities-bond mix of the available choices. Goetzman & Kumar (2003) show individual investors who are young and less wealthy hold more under-diversified portfolios, suggesting that they may exhibit stronger behavioral biases. Aduda et al. (2012) while conducting their study on “the behavior and financial performance of individual investors in the trading shares of companies listed at the Nairobi Securities Exchange, Kenya” with the first objective of their study being „to find out how individual investors make their investment decisions”, they found out that, influence from friends; where most investors relied on advice from friends and colleagues (3.65 on a Likert scale of 1-5) before deciding to go for securities and; popular opinion about the market (3.58) and from recent trend in share price movements (3.53), were clear indication of herd behavior existing in NSE.

Yvan. (2010) in a study examining whether the African Growth Opportunity Act (AGOA) legislation has had any impact on the market returns in Kenya identified that there are always some trade barriers or restrictions that are not removed by free trade agreements and that many companies listed on the NSE export their products to the United States under the AGOA agreement. In this study Yvan noted that the securities market reacts to different events. Psychological elements impact financial practitioners and therefore move the securities markets. Events such as press releases, rumors, panics and euphoria can psychologically affect traders, thus affect the securities market, Michayluk & Sanger (2006). According to Yvan (2010) psychological effects can impact the success of initial public offerings (IPOs) and investment decisions. The initial public offering is the process where a company (issuing firm) issues common securities to the public for the first time under the assistance of the underwriting firm. It is one of the most common ways of raising capital.
The findings of Nyamute & Maina (2010) indicated that financial literacy does not necessarily lead to better emergency management. They associated this outcome by the fact that emergency expectation is a behavioral aspect that leads to different levels of risk tolerance by human beings regardless of the level of financial literacy. A report by FSD Kenya (2009) established that Kenyans are keen to save, however just over half of those interviewed stated that they save towards meeting day to day expenses rather than for long term needs. Fewer than half of adult Kenyans say that they have a financial asset that they can use in an emergency, and the poor are particularly ill prepared to deal with medical emergencies and bereavements. There does seem to be a gap in the capability of consumers to plan financially to cope with a crisis. Most respondents say that they would turn to family and friends to help them manage. Again, this raises the question of financial capability. In their discourse of financial capability, FSD Kenya (2009) suggested that the meaning of the term should be understood in context. They argue that in a developed country context, a financially capable person would have home, car and life insurance to deal with risks. But in an environment where consumers have a long list of simultaneous risks but few insurance products with which to manage them, a financially capable person would be better defined as having a clear, self-defined strategy, backed by enough saving and borrowing resources, to manage their vulnerabilities.

As mentioned above, there are several investment decisions related to securities trading, such as: buying, selling, choice of securities, length of time to hold securities, and volume of securities to trade. However, in this part, two important securities trading decisions: selling and buying are focused because they have connection to the other decisions, and highly impact on the investment performance

2.4.1 The Selling Decision

Previous studies report that investors decrease the selling decisions of assets that get a loss in comparison to the initial purchasing price, a trend called the “disposition effect” by Shefrin and Statman (1985). Odean (1998) confirms the same conclusion that individual investors tend to sell securities which their values, in comparison to their original buying price, increase rather than sell the decreasing securities. However, it is difficult to demonstrate this phenomenon in the rational ground. It is not really reasonable to conclude that investors rationally sell winning securities because they can foresee their poor performance. Besides, Odean also recognizes
that the average return of sold securities is greater than that of the average return of securities that investors hold on.

Genesove and Mayer (2001) state that investors who sell their assets at the price less than original purchase price usually expect the selling price is more than other sellers’ asking price. It is not only the expectation of the sellers, but also the correction of market decides the selling price: investors encountering a loss often do the transaction at the relatively higher price than others. Coval and Shumway (2000) find that investors, according to prospect theory, having gains (losses) in the first half of trading day tend to take less (more) risk in the second half of trading day. Grinblatt and Han (2001) claim that the behavior of investors which is described as the disposition effect can be considered as a puzzling characteristic of the cross-section of average returns, called momentum in securities returns. In which, investors prefer selling a securities that has helped them to gain capital. The selling pressure can firstly slow down the securities price, and then create higher returns. In contrast, if the securities holders are experiencing capital losses, they may merely make decision of selling when an expected price is given. In this case, the price may be initially increased, leading to lower returns later.

2.4.2 The Buying Decision

Odean (1999) provides several understandings about the preferable securities that individual investors would like to buy. As mentioned above, selling decisions mainly prioritize winning securities; whereas, buying decisions are related to both prior winning and losing securities. Odean states that the buying decisions may be a result of an attention effect. When making a decision of securities purchase, people may not find a good securities to buy after considering systematically the thousands of listed securities. They normally buy a securities having caught their interest and maybe the greatest source for attention is from the tremendous past performance, even good or bad.

According to Barberis and Thaler (2003), individual investors seem to be less impacted by attention-grasping securities for their selling decisions because the selling decision and the buying decision are differently run. Because of short-sale restraints, when deciding to choose securities for selling, they can only focus on the securities that currently belong to them. Whereas, with a buying decision, individuals have a lot of chances to choose the wanted
securities from the wide range of selective sources, this explains why factors of attention impact more on the securities buying decisions than the selling decisions.

Barber and Odean (2002) already prove that the selling decisions are less determined by attention than buying decisions in case of individual investors. To give this conclusion, they create the menu of attention-grasping securities with several criteria: unusually high trading volume securities, abnormally high or low return securities, and securities including news announcements. Eventually, the authors explore that the individual investors in their sample are more interested in purchasing these high-attention securities than selling them.

As such, from the viewpoints of behavioral finance, the investor behaviors impact both selling and buying decisions at different levels, and then they also impact the general returns of the market as well as the investment performance of individuals.

2.5 Chapter Summary
This chapter highlights empirical work done on identifying the behavioral factors that influence retail investors, the impact of behavioral factors on the decisions taken out by investors and the impact of behavioral factors on investment performance. The next chapter deals with Research Methodology.

CHAPTER THREE
3.0 RESEARCH METHODOLOGY
3.1 Introduction
This chapter focuses on the procedures that were used to collect data. The study will involve various select individuals of capital investors that have been involved in the Nairobi Securities
Exchange (NSE). The study purpose was to investigate the behavioral factors that influence trading choices among investors at the NSE.

3.2 Research Design
Research design can be defined as the plan and structure of investigation conceived so as to obtain answers to the research question (Trochim, 2000). Greswell (2009) posits that research design involves the planning, organization, collection and analysis of data to provide information and also solutions to the existing problem of the study. According to Green and Tull (2009), a research design is the specification of methods and procedures for acquiring the information needed. It is the over-all operational pattern or framework of the project that stipulates what information is to be collected from which source by what procedures. Research design is important as it prepares proper framework within which the research work/activity will be actually carried out.

This study employed causal research design. The causal research is quantitative study that utilizes structured questionnaires. For this reason, it is also considered conclusive research. Causal research differs in its attempt to explain the cause and effect relationship between variables. This is opposed to the observational style of descriptive research, because it attempts to decipher whether a relationship is causal through experimentation. In the end, causal research will have two objectives: 1) To understand which variables are the cause and which variables are the effect, and 2) to determine the nature of the relationship between the causal variables and the effect to be predicted.

3.3 Population and Sampling
3.3.1 Population
Population is defined as the entire set of observable characteristics with which the findings of the study will be generalized (Mugenda&Mugenda, 2003). Kothari et. al., (2010) defines research population as a well-defined collection of individuals or objects known to have similar characteristics. Capital Markets Authority (CMA), estimate about 4,400 retail investors are registered at Nairobi Securities Exchange (CMA, 2014). Therefore the target population for this study was the 4,400 NSE retail investors with stock trading accounts secured by registered securities brokerage and investment banks at the NSE. The list of retail investors and their
individual stock performance is maintained by the Nairobi Securities Exchange, at the investor relations division that maintains financial reports & results for all investors (NSE, 2016).

### 3.3.2 Sampling Design

This section explains the procedure used to calculate the sample for the study. Bell (1999) postulated that, a sample is a subset of the population which represents the characteristics of the population or a portion of the population selected for analysis. The sampling frame describes the list of all population units from which the sample selected, Cooper & Schindler (2003).

#### 3.3.2.1 Sampling Frame

According to Cooper and Schindler (2014) sampling frame is a list of elements from which sample is actually drawn and is closely related to the population. Denscombe (2007) on the hand, defined sampling frame as the objective population list from where the sample was selected from. Data from Nairobi Securities Exchange (NSE) and Capital Markets Authority (CMA), indicate that there are about 20 registered securities brokerage and investment banks, which hold about 4,400 stock trading accounts for NSE retail investors (NSE, 2016; CMA, 2016). Therefore the sample was drawn from the 4,400 retail investors at the NSE.

#### 3.3.2.2 Sampling Technique

Sampling technique refers to the strategy which the researcher adopts as the procedure for identifying the most qualified respondents to the study questions (Babbie, 2010). Sampling technique defines the scientific procedures which are used in selecting a sample in a given set of target population (De Leeuw et al., 2008). The nature of the study requires the use of the purposive sampling technique for selecting respondents. The study adopted purposive sampling. In this method, the researcher was able to identify the most active retail traders at NSE and convince them to participate in the study. This strategy was useful as it enabled the selection of retail investors who have valuable input on the behavioral factors that influenced the choice of investment options at the NSE.

#### 3.3.2.3 Sample Size
Barbie (2010) defined sample size as the actual number of respondents the researcher aims to interview. In addition, sample size is also referred to as the number of sampling units selected from the study population (Chandan, Singh and Khanna, 2010). This study computed the size using Taro Yamane’s 1967 statistical formula for sample size determination (Yamane, 1967).

\[ n = \frac{N}{1+Ne^2} \]

Where, \( n \) = sample size, \( N \) = target Population, and \( e^2 \) = probability error (derived from the confidence interval).

The target population (\( N \)) was 4,400, whereas the study settled for 90% confidence interval which means the probability error allowed was, 10% \((0.1)\).

Therefore the calculation for the sample size;

\[ n = \frac{4,400}{1+4,400 (0.1^2)} \]

\[ n = \frac{4,400}{1+4,400(0.01)} \]

\[ n = \frac{4,400}{1+44} = \frac{4,400}{45} = 97.8 \text{, round off to the nearest person, } = 98 \]

Thus, \( n = 98 \) respondents

3.4 Data Collection Methods

Morris (2001) observed that data collection procedure is the process of gathering pieces of information that are necessary for research process. Primary data present the actual information that was obtained for the purpose of the research study. Data collection instrument is a device used to collect data in an objective and a systematic manner for the purpose of the research (Orodho, 2009). The selected individuals shall be given the questionnaire to fill where those with any difficulties were guided by a research assistant who also assisted in disseminating and collecting the questionnaires.

The questionnaire was subdivided into two sections, with the first section covering the demographic details of the respondent, while the second part consisted of the firm’s image, market information, financial needs, and other economic scenarios. This research was based on the theories of behavioral finance: Heuristic theory, Prospect theory, and other theories.
about impacts of behavioral factors on investors' decision making, which are mentioned by Waweru et al, (2008) and many other authors cited in the literature review, to synthesize a set of questions related to behavioral factors influencing investment decisions. A 6-point Likert scales, which are rating scales widely used for asking respondents’ opinions and attitudes was utilized to ask the individual investors to evaluate the degrees of their agreement with the impacts of behavioral factors on their investment decision. The 6 points in the scale are respectively from 1 to 6: extremely disagree, highly disagree, somewhat disagree, somewhat agree, highly agree, and extremely agree.

3.5 Research Procedure
Lescroel (2015) posits that research procedure is the sequence of activities that are followed when carrying out field study. The researcher commenced the process by conducting a pilot test of the questionnaire. This process involved distributing 5 questionnaires to respondents who were not part of the final study. The pilot test was carried out for the purposes of ensuring that the questionnaires are complete, precise, accurate and clear. This assisted in assessing the reliability and validity of the data collection instrument (Mugenda and Mugenda, 2008). The researcher then sought for an official letter from the institution that was be used to request for permission to conduct a field survey at the NSE. The letter explained all the details on the intents and purposes regarding the field survey. Upon acceptance of the request to conduct the survey, the researcher took the initiative to personally deliver the questionnaire to the respondents. The researcher personally convinced the respondents to answer the questionnaires on the spot if possible. Those who agreed to participate in the study but were busy at the time were given enough time to fill the questionnaires at their own pace. The researcher ensured made prompt follow-up relying on phone calls till a sizeable number of participants contributed to the study.

3.6 Data Analysis Method
Bryan and Bell (2003) defined data analysis as the process of making inferences from the collected data through systematic and objective identification of specific characteristics. Upon completion of the field study, data analysis process was next course of action. The data and information obtained through the questionnaire was checked for completeness. All the returned questionnaires were found correctly filled and fit for analysis, thus the researcher coded them
and made entries into Statistical Package for Social Sciences (version, 20) and analyzed using quantitative techniques.

The study adopted descriptive statistics in presenting the data. According to Cooper and Schindler (2008) descriptive statistics is the process of transforming raw data into tables and charts using frequency distributions and charts. In this study descriptive statistics including frequencies and percentages was used to present and analyze the demographic details of respondents. Measures of central tendencies including, mean, standard deviation, variance and skew were used to present and analyze the responses on research questions. The study adopted inferential statistics, which included the correlation tests, to test for significance between the independent and dependent variables. This was useful in assessing whether the findings in this study can be inferred to the target population.

3.7 Chapter Summary
This part of the project covered the research methodology, which is a detailed description of the process that the researcher used while conducting the field survey. The research methodology was presented in the following sections; research design, population, sampling frame, sampling technique, sample size, data collection methods, research procedure and data analysis method. The next chapter will deal with data presentation and analysis.

CHAPTER FOUR
4.0 DATA PRESENTATION AND ANALYSIS

4.1 Introduction
This section presents the data gathered from the field survey with subsequent interpretation of the results in relation to the topic of study. The presentation will use graphs, table and charts to offer a visual representation of the field findings. The study will use Pearson’s correlations to draw the statistical relationship between the independent variables, which included the
behavioral factors that influenced investment decisions in the securities exchange and the dependent variable which is the investment performance.

4.2 Response Rate

A total of 98 questionnaires were issued to the respondents for their input on the subject of behavioral factors influence on the investment decisions on the capital markets. The data in figure 4.1 present the response rate from the field survey.

![Response Rate](image)

*Figure 4.1 Response rate*

*Source: Researcher, (2017)*

Out of the issued 100 questionnaire, 86 questionnaires were successful returned in time for data analysis. This represents, 88% response rate. The response was in consistent with Mugenda and Mugenda (2003), who explained that a response rate of 70% and above is sufficient for data analysis. The study thus was satisfied with the response rate, which represents a representative sample for the study population. The N value in this study is 86 (N = 86).

4.3 Demographic Data

4.3.1 Gender Distribution

The data in figure 4.2 represents the gender distribution among the respondents of study.
Figure 4.2 the gender distribution amongst the respondents
Source: Researcher, (2017)

The findings in figure 4.2 indicate that, majority of the participants about 58% were male, whereas female participation totaled to about 42%. The study makes a finding that majority of the retail traders at the Nairobi Securities exchange are male. The results indicate that there exists a slight gender imbalance at the securities exchange however there is a good progress towards realization of absolute gender balance.

4.3.2 Age distribution

The findings in table 4.1 indicate the age distribution across different participants in the study computed in percentages from the sample of 86 respondents.

Table 4.1 Age distribution

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 25 years</td>
<td>4</td>
<td>4.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>26 - 35 years</td>
<td>27</td>
<td>31.4%</td>
<td>36.0%</td>
</tr>
<tr>
<td>36 - 45 years</td>
<td>47</td>
<td>54.7%</td>
<td>90.7%</td>
</tr>
<tr>
<td>46 - 55 years</td>
<td>5</td>
<td>5.8%</td>
<td>96.5%</td>
</tr>
<tr>
<td>Over 55 years</td>
<td>3</td>
<td>3.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>100.0%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings presented in table 4.1 indicate that majority of the respondents, about 54.7%, are in the age group 36 – 45 years. This represents an age group that has a working experience of over 10 years thus giving them a deeper understanding of the securities market, a valuable contribution to this study. The respondents at the age group, 26 – 35 years, occupied the second
with a representation of 31.4%. The respondents aged 46 – 55 years, were about 5.8%, of the respondents, 18 – 25 % were 4.7% of the respondents and finally those over 55 years of age were about 3.5% of the respondents. The findings in the study implicate that, work experience at the NSE, is a critical component of stock retail trader.

4.3.3 Marital Status

The data in figure 4.3 presents the marital distribution among the respondents using the participant’s distribution (N=86) as the point basis.

![Figure 4.3 the marital status distribution among the respondents](source: Researcher, 2017)

The findings in figure 4.3 indicate that an overwhelming majority of the respondents, about 82.6% were married. About 9.3% of the respondents indicated that they are single, whereas 8.1% of the respondents indicate that they are divorced. The findings implicate that family values plays a big part of retail traders at the securities market, and it also forms a basis for encouragement and motivation to work harder in their daily engagements.

4.3.4 Education Level

The data in figure 4.2 present the distribution of respondent’s education level.

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>3</td>
<td>3.5 %</td>
<td>3.5 %</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>48</td>
<td>55.8%</td>
<td>59.3%</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>33</td>
<td>38.4%</td>
<td>97.7%</td>
</tr>
</tbody>
</table>
The findings in table 4.2 present the distribution of respondents in regard to the level of education they have attained. Majority of the respondents, about 55.8%, indicated to have attained a minimum of Bachelors degree. About 38.4% of the respondents indicated that they had attained a Masters Degree. About 3.5% of the respondents indicated that they attained a Diploma and about 2.3% of the respondents indicated to have attained a Doctor of Philosophy (PhD) Degree. The findings indicate that, an overwhelming majority of the respondents have attained a high level of academic qualification. The findings imply that academic attainment is a critical factor for effective participation at the Securities market.

### 4.3.5 Experience at the Securities Markets

The data in table 4.3 present the distribution of respondents experience at the securities markets.

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>5</td>
<td>5.8%</td>
<td>5.8%</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>54</td>
<td>62.8%</td>
<td>68.6%</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>27</td>
<td>31.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>100.0%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.3, present the respondents experience at the securities markets. The majority of the respondents, about 62.8%, indicated that they have an experience of 5 – 10 years. About 31.4 % of the respondents indicated that they had an experience of over 10 years, while about 5.8% of the respondents indicated that they had an experienced of under 5 years. The findings imply that experience plays a critical role in the understanding the working of the securities market.

### 4.3.6 Average monthly income

The data in table 4.4 present the distribution in monthly income among the respondents.
Table 4.4 Average income

<table>
<thead>
<tr>
<th>Income distribution</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under KSH 100,000</td>
<td>4</td>
<td>4.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>KSH 100,000 - 300,000</td>
<td>34</td>
<td>39.5%</td>
<td>44.2%</td>
</tr>
<tr>
<td>KSH 300,000 - 600,000</td>
<td>31</td>
<td>36.0%</td>
<td>80.2%</td>
</tr>
<tr>
<td>Over KSH 600,000</td>
<td>17</td>
<td>19.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>NA</strong></td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.4, present the monthly income distribution among the participants in this study. Majority of the respondents, about 39.5%, indicated that, their monthly income averages about, KSH 100,000 – 300,000. Closely following was about 36.0% of the respondents who indicated that, the earned an average income of about KSH. 300,000 – 600,000. About, 19.8% of the respondents indicated that their average monthly income was over KSH. 600,000. Finally, about, 4.7 % of the respondents indicated that they earned an average monthly income of under KSH. 100,000. The results indicate that average income for retail traders at the securities exchange is KSH. 300,000. This indicates that, approach adopted by the traders in settling for investing decisions must offer lead to the possibility of attaining a monthly average of KSH300, 000 in income.

4.3.7 Duration of participation in Stocks Trading

The data in table 4.5 present the data on the duration in participation on the actual trading among the respondents.

Table 4.5 The duration in stock trading

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 3 years</td>
<td>10</td>
<td>11.6%</td>
<td>11.6 %</td>
</tr>
<tr>
<td>3 - 5 years</td>
<td>20</td>
<td>23.3%</td>
<td>34.9%</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>35</td>
<td>40.7%</td>
<td>75.6%</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>21</td>
<td>24.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>NA</strong></td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.5 present the results on the duration in years on the experience among the respondents in trading securities at the NSE. Majority of the respondents, about 40.7%, indicated to have participated in stock trading for about 5 – 10 years. About, 24.4 % of the
respondents, indicated to have stock trading experience of over 10 years. About 23.3% of the respondents indicated that they had a stock trading experience of about 3 – 5 years. Finally about 11.6% of the respondents indicated to have a stock trading experience, of about 1 – 3 years. The study establishes an average participation in stock trading of over 5%. This implies that, before commencement to actual stock trading, the retail investors spend a period to learn and train on the basics and the intricacies of stock trading.

4.3.7 Investment account security

The data in table 4.6 present the distribution of security holders for securities accounts among the traders at the Nairobi securities exchange.

**Table 4.6 Investment security companies**

<table>
<thead>
<tr>
<th>Companies at NSE</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyer and Blair</td>
<td>8</td>
<td>9.3 %</td>
<td>9.3 %</td>
</tr>
<tr>
<td>Genghis Capital</td>
<td>6</td>
<td>7.0 %</td>
<td>16.3%</td>
</tr>
<tr>
<td>Equity Investment Bank</td>
<td>14</td>
<td>16.3%</td>
<td>32.6%</td>
</tr>
<tr>
<td>CBA Capital</td>
<td>13</td>
<td>15.1%</td>
<td>47.7%</td>
</tr>
<tr>
<td>Standard Investment capital</td>
<td>10</td>
<td>11.6%</td>
<td>59.3%</td>
</tr>
<tr>
<td>ABC Capital</td>
<td>9</td>
<td>10.5%</td>
<td>69.8%</td>
</tr>
<tr>
<td>NIC Bank</td>
<td>9</td>
<td>10.5%</td>
<td>80.2%</td>
</tr>
<tr>
<td>SBG Capital</td>
<td>7</td>
<td>8.1%</td>
<td>88.4%</td>
</tr>
<tr>
<td>Old mutual securities</td>
<td>5</td>
<td>5.8%</td>
<td>94.2%</td>
</tr>
<tr>
<td>Renaissance Capital</td>
<td>5</td>
<td>5.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>100.0%</strong></td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.6, indicate that majority of the respondents, have investment security accounts with, Equity investment bank at 16.3%. The distribution is largely even across the companies. These were; About 15.1% for CBA capital, 11.6% for Standard investment capital, 10.5% for ABC Capital & NIC Bank, 9.3% for Dyer and Blair, 8.1% for SBG capital, 7.0% for Ganghis Capital, and about 5.8% for Old Mutual and Renaissance capital

4.3.8 Training on Stock trading

The data in table 4.7 indicates that the results on the responses with regard to formal training on trading exercise.
Table 4.7 Training on Stock exchange

<table>
<thead>
<tr>
<th>Training</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>69</td>
<td>80.2%</td>
<td>80.2%</td>
</tr>
<tr>
<td>Not Yet</td>
<td>17</td>
<td>19.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>100.0%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.7, present the results on training on the basics of stock trading. An overwhelming majority of about, 80.2% of the respondents indicated that they have had a formal training on stock trading. Only about 19.8% of the respondents who indicated that they have no training on stock trading. The finding implies that, formal training is a vital component in effort to become a stock trader at the securities market.

4.3.10 Amount Invested at the NSE

The data in table 4.8 present the distribution in the amount that is invested at the NSE by the Participating investors.

Table 4.8 the amount invested at the NSE

<table>
<thead>
<tr>
<th>Average invested at the NSE</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>40,000 - 99,999</td>
<td>4</td>
<td>4.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>100,000 - 199,999</td>
<td>18</td>
<td>20.9%</td>
<td>25.6%</td>
</tr>
<tr>
<td>200,000 - 299,999</td>
<td>24</td>
<td>27.9%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Over 300,000</td>
<td>40</td>
<td>46.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>100.0%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.8 present the outcome on the average amount invested at the NSE among the stock traders who participated in the study. Majority of the respondents, about 46.5%, indicated that they have invested over KSH. 300,000 at the securities exchange. About, 27.9% of the respondents indicated that they have invested about KSH. 200,000 – under 300,000. About, 20.9% of the respondents indicated that, they have invested over KSH 100,000 but less than 200,000. Finally, only 4.7% of the respondents indicated to have invested about KSH 40,000 to about KSH 99,999. The findings imply that, for average trading returns, the minimal investment should be at least 200,000.

4.3.11 Amount invested at the NSE over the past 24 Months
The data in table 4.9 presents the distribution in the range of figures indicating the average amount of investments in the past 24 months.

### Table 4.9 the total invested in the past 24 months

<table>
<thead>
<tr>
<th>Amount Invested in Last 2 years</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000 - 39,999</td>
<td>4</td>
<td>4.7%</td>
<td>4.7</td>
</tr>
<tr>
<td>40,000 - 99,999</td>
<td>31</td>
<td>36.0%</td>
<td>40.7</td>
</tr>
<tr>
<td>100,000 - 199,000</td>
<td>36</td>
<td>41.9%</td>
<td>82.6</td>
</tr>
<tr>
<td>200,000 - 299,999</td>
<td>7</td>
<td>8.1%</td>
<td>90.7</td>
</tr>
<tr>
<td>Over 300,000</td>
<td>8</td>
<td>9.3%</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>86</strong></td>
<td><strong>100.0%</strong></td>
<td>NA</td>
</tr>
</tbody>
</table>

**Source:** Researcher, (2017)

The findings in table 4.9, present the distribution on the amount investors have staked at the securities market. Majority of the respondents, about 41.9% indicated to have invested about, KSH. 100,000 – Under 300,000. About, 36.0% of the respondents indicated that they had invested about KSH 40,000 – Under 100,000. About 9.3% indicated that, they had invested over KSH 300,000 at the NSE. About, 8.1% of the respondents indicated that they had invested about KSH 200,000 – Under 300,000. Finally, about 4.7% of the respondents indicated that, they had invested about KSH. 20,000 – Under 40,000. The findings imply that to have generated average returns on the past 2 years, the investor should have put an average of KSH 200,000.

### 4.4 Market behavioral factors on Investment decisions

The data in table 4.10 present the findings on the mean and standard deviation for market behavioral factors.

### Table 4.10 Market behavioral factors Mean and Standard Deviation

<table>
<thead>
<tr>
<th>Market behavioral Factors</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
</tbody>
</table>

38
<table>
<thead>
<tr>
<th>Market fundamentals</th>
<th>86</th>
<th>5.40</th>
<th>.538</th>
<th>.289</th>
<th>-.034</th>
<th>.260</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock trends</td>
<td>86</td>
<td>5.34</td>
<td>.476</td>
<td>.226</td>
<td>.701</td>
<td>.260</td>
</tr>
<tr>
<td>Market information</td>
<td>86</td>
<td>5.07</td>
<td>.699</td>
<td>.489</td>
<td>-.096</td>
<td>.260</td>
</tr>
<tr>
<td>Past experience</td>
<td>86</td>
<td>5.00</td>
<td>.594</td>
<td>.353</td>
<td>.000</td>
<td>.260</td>
</tr>
<tr>
<td>Skills and knowledge</td>
<td>86</td>
<td>4.95</td>
<td>.684</td>
<td>.468</td>
<td>.059</td>
<td>.260</td>
</tr>
<tr>
<td>High performing stocks</td>
<td>86</td>
<td>4.94</td>
<td>.709</td>
<td>.502</td>
<td>.083</td>
<td>.260</td>
</tr>
<tr>
<td>Company customer preference</td>
<td>86</td>
<td>3.92</td>
<td>.897</td>
<td>.805</td>
<td>.363</td>
<td>.260</td>
</tr>
<tr>
<td>Information access</td>
<td>86</td>
<td>3.86</td>
<td>.769</td>
<td>.592</td>
<td>.246</td>
<td>.260</td>
</tr>
<tr>
<td>Advices from friends and relatives</td>
<td>86</td>
<td>3.57</td>
<td>.760</td>
<td>.577</td>
<td>.252</td>
<td>.260</td>
</tr>
<tr>
<td>Reactive to stock price fluctuations</td>
<td>86</td>
<td>3.03</td>
<td>1.278</td>
<td>1.634</td>
<td>.176</td>
<td>.260</td>
</tr>
</tbody>
</table>

**Source: Researcher, (2017)**

The findings in table 4.10, present the findings on the influence of market behavioral factors on the investors decisions on stock investments. A scale of 1 – 6 was used where; 1 = extremely disagree, 2 = highly disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = highly agree, 6 = extremely agree. The study makes a finding that market fundamental was the most influential factor on investment decision with a mean of 5.40 and standard deviation 0.538. This indicates that, majority of the respondents are in agreement that the investors study the market fundamentals of underlying stocks before making investment decisions. The study establishes that, the second most influential factor on investment decisions is the stock trends with a mean of 5.34 and standard deviation of 0.476. This indicates that majority of the respondents highly agree that, they placed the past trends of stocks under consideration for any investment they made. The study makes a finding that, key market factors including; market information with a mean of 5.07, past experience with a mean of 5.00, skills and knowledge with a mean of 4.95 and high stock performance with a mean of 4.94 have strong influence on the investors decisions on stock investments.
The study makes a finding that, market behavioral factors including; customer preference with a mean of 3.92, information access with a mean of 3.86, advice from friends and relatives with a mean of 3.57 and reactive to stock fluctuations had a minimal influence on the investors decision for the particular stocks they have. This implies that, the market fundamentals underlying a particular stock were the strongest factors that influenced the investor’s decisions.

4.5 Other investors influence on investment decisions
The data on table 4.11 presents the mean and Std. deviation of other investor’s behavioral factors influence on investment decisions.

Table 4.11 Other investors influence Mean and Std. Deviation

<table>
<thead>
<tr>
<th>Other investor factors</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
<tr>
<td>stock type choice</td>
<td>86</td>
<td>4.76</td>
<td>.932</td>
<td>.869</td>
<td>-.203</td>
</tr>
<tr>
<td>Stock volume choice</td>
<td>86</td>
<td>4.64</td>
<td>.825</td>
<td>.680</td>
<td>-.396</td>
</tr>
<tr>
<td>Reactions to the stock market</td>
<td>86</td>
<td>4.55</td>
<td>.626</td>
<td>.392</td>
<td>-1.063</td>
</tr>
<tr>
<td>Stock trading</td>
<td>86</td>
<td>4.42</td>
<td>.789</td>
<td>.623</td>
<td>-.902</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.11, present the mean and standard deviation for other investor factors influence on the investment decisions. A scale of 1 – 6 was used where; 1 = extremely disagree, 2 = highly disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = highly agree, 6 = extremely agree. The findings indicate that, stock choice had an influence on the investor decision, with a mean of 4.76. This indicates that, majority of the respondents is in agreement that other investors decisions of choosing stock types have an impact on the investment decisions made by retail investors at the securities exchange. The study makes a finding that other investor factors including; stock volume choice with a mean of 4.64, reaction to stock market with a mean of 4.55 and stock trading practices wielded influence on the investment decisions made by retail investors.
4.6 Effects of behavioral factors in investment decisions

The data in table 4.12, presents the mean and standard deviation for the effects of behavioral factors on the investors decisions.

Table 4.12 Effects of behavioral factors on investors decisions Mean & Std. Deviation

<table>
<thead>
<tr>
<th>Effects of Behavioral factors</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
<tr>
<td>Price fluctuations</td>
<td>86</td>
<td>5.35</td>
<td>.479</td>
<td>.230</td>
<td>.646</td>
</tr>
<tr>
<td>Anticipation for outcome</td>
<td>86</td>
<td>5.05</td>
<td>.592</td>
<td>.351</td>
<td>-0.010</td>
</tr>
<tr>
<td>Trend analysis</td>
<td>86</td>
<td>5.05</td>
<td>.592</td>
<td>.351</td>
<td>-0.010</td>
</tr>
<tr>
<td>Forecast on changes</td>
<td>86</td>
<td>4.88</td>
<td>.562</td>
<td>.316</td>
<td>-0.034</td>
</tr>
<tr>
<td>Portfolio separation</td>
<td>86</td>
<td>4.58</td>
<td>.659</td>
<td>.434</td>
<td>.449</td>
</tr>
<tr>
<td>Perceptive to stock holding and selling</td>
<td>86</td>
<td>4.12</td>
<td>.676</td>
<td>.457</td>
<td>-1.444</td>
</tr>
<tr>
<td>Prior gain on risk seeking</td>
<td>86</td>
<td>4.05</td>
<td>.766</td>
<td>.586</td>
<td>-0.079</td>
</tr>
<tr>
<td>Shares fluctuations</td>
<td>86</td>
<td>3.93</td>
<td>.732</td>
<td>.536</td>
<td>.109</td>
</tr>
<tr>
<td>Avoidance of investment possibilities</td>
<td>86</td>
<td>2.83</td>
<td>.814</td>
<td>.663</td>
<td>.735</td>
</tr>
<tr>
<td>Prior loss instigates risk aversive</td>
<td>86</td>
<td>2.20</td>
<td>.879</td>
<td>.772</td>
<td>.664</td>
</tr>
</tbody>
</table>

Source: Researcher, (2017)

The findings in table 4.12, present the mean and standard deviations derived from, tabulations of the influence effects of behavioral factors wield on investment decisions. A scale of 1 – 6 was used where; 1 = extremely disagree, 2 = highly disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = highly agree, 6 = extremely agree. The study makes a finding that price fluctuations with a mean of 5.35, was the most significant effect of behavioral factor that influenced retail investor’s investment decision. The study makes a finding that, the respondents, are in agreement that retail investors avoid selling shares that have decreased in value and readily sell shares that have increased in value. The study makes a finding that, anticipation for outcome with a mean of 5.05, was the second most influential effect of
behavioral factor. This indicates that, the respondents are highly in agreement that, the retail investors are able to anticipate the end of good or poor market returns at the NSE.

The study makes a finding that, effects of behavioral factors including; trend analysis with a mean of 5.05, forecast with a mean of 4.88, portfolio separation with a mean of 4.58, perceptive to stock trading practices with a mean of 4.12, prior gain on risk seeking with a mean of 4.05 and share fluctuations with a mean of 3.93 wielded a minimal influence on the respondents decision on stock trading investments. The study makes a finding that the avoidance of investment possibilities had a little effect on investors decisions. Similarly the study makes a finding that prior loss didn’t instill risk evasiveness to the retail investors with a mean of 2.20. These findings imply effects of behavioral factors wield significance impact on the investment decisions made by retail traders.

4.7 Correlation Tests

Correlation test helps in assessing for the existence of statistical association between the independent variable and the dependent variable. The tests also yield the significant factor which helps in evaluating whether the findings of the study can be inferred for the target population.

4.7.1 Correlations on market factors and investment performance

The data in table 4.13, presents the results of the computation on the influence of behavioral factors on investment performance.

Table 4.13 Correlations on market behavioral factors on investment performance

<table>
<thead>
<tr>
<th>Market behavioral factor</th>
<th>Pearson Correlation</th>
<th>Investment performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market behavioral factor</td>
<td>1</td>
<td>.701**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>86</td>
<td>86</td>
</tr>
</tbody>
</table>
The findings in table 4.13, present the correlation between the market behavioral factors and the investment performance of the stock returns. The correlation establishes a positive linear relationship between market behavioral factors and the performance investments. The significance is reflected at level 0.01, recording a p value of 0.000 which indicates that there exist a significant statistical relationship (p < 0.01, Correlation Coefficient = 0.701, \( R^2 = 0.491 \)).

The Correlation value, 0.701, indicates that the relationship is strong positive. This implies that, a positive change in market behavioral factors will trigger a strong change in investment performance. The \( R^2 \) Value, 0.491, implies that, behavioral factors account for 49.1% in variability for the performance in investments, whereas, 50.9% in variability in the performance of investments can be attributed to other factors external to the test.

### 4.7.2 Correlation between behavioral factors and investment performance

The data in table 4.14 presents the results of correlation test between behavioral factors and the performance of investment.

<table>
<thead>
<tr>
<th>Effects of behavioral factors</th>
<th>Pearson Correlation</th>
<th>Investment performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of behavioral factors</td>
<td>1</td>
<td>0.610**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>86</td>
<td>86</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed). \( R^2 = 0.491 \)**
The findings in table 4.14, present the correlation relationship between the effects of behavioral factors on the performance of stocks accumulated by retail investors. The correlation value deduced from table 4.14, indicate that there exist a positive relationship between effects of behavioral factors on the investment performance.

The computation at significance level 0.01, registers a p value of 0.000, which indicates that, there exist significant statistical relationship between effects of behavioral factors on investment performance ($p < 0.001, p = 0.000, R = 0.610, R^2 = 0.3721$). The r value, generated 0.610, indicates that the relationship is a strong positive correlation between the effects of behavioral factors and the investment performance.

The $R^2$ value computed in the test, 0.3721, indicated that the behavioral factors account for 37.21% in the variability in the performance of stocks, with 62.79% of variability attributed to other factors. The findings imply that, a positive change in effects of behavioral factors will trigger significant positive change on the investment performance.

4.8 Summary
This section of the study covered the data presentation and data analysis of the field survey. This included the response, demographic data, market behavioral factors, other investor factors, impacts of behavioral factors and correlation tests. The next chapter will deal with discussions, conclusions and recommendations

CHAPTER FIVE
5.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS
5.1 Introduction
This section of the study covers the summary of the findings which highlights the key main findings in the study. The section will then cover the discussion on the findings, where thematic association is made between the main findings of this study and the past literature on the influence of behavioral factors that affect the investment performance b retail investors at the Nairobi Securities exchange. The chapter will then draw the main conclusions from the field study and offer recommendations drawn from the findings.
5.2 Summary of the findings
The main purpose of this study was to assess the influence of financial behavioral factors on the investment choices by the retail traders at the NSE. The study used causal quantitative research approach in the field survey. The study makes a finding that majority of the retail investors, representing over 70% having acquired a minimum of bachelor’s degree. The study makes a finding that education plays an important component of retail investment at the Nairobi Securities Exchange. The study makes a finding that, the education is a critical factor that yields significant influence on the success of retail investors. Data collected highlight, the importance of conscious approach towards investments, which is also influenced by the nature of information an investor has, and the capacity to critically analyze it to make investment decisions. The study makes a finding that with high academic qualification enhances the urge among the investors to rely on comprehensive information reports on stock market as a basis for making investment decisions. The study, makes a finding that, majority of the retail traders at the NSE, have a strong family virtue, supported by an overwhelming commitment to values of care which enhances the intuition for caution and planning.

The study makes a finding that, the average estimate for work experience among many traders at the NSE, is 10 years (The range 5 – 10 years). The study makes a finding that, experience at the Nairobi securities exchange enhances retailer capacity and impacts on the average monthly returns. The study makes findings that, monthly returns for active traders with over 10 years of experience averaged over, KSH. 300,000. The study makes a finding that, in addition to decent monthly returns for experienced traders, the results indicate that, majority of traders with over 10 years of active participation in stock trading have invested at least KSH 300,000 at the NSE, with the past 24 months having invested at least KSH 100,000 at the securities exchange. Further, the study makes a finding that an overwhelming majority of the respondents have some kind of formal training on stock trading.

5.3 Discussion of the findings
5.3.1 Which are the market behavioral factors that influence the investment performance of retail traders?

The study makes a finding that the other investor factors in relation to their reaction to stocks at the market wield a significant influence on trader’s investment decisions. The study makes
a finding that, market fundamentals is the most critical market behavioral factor (Mean = 5.40, Standard Deviation = 0.538). The study also makes a finding that, stock trends is the second most critical market behavioral factor that impacted on investors decisions (Mean = 5.34, Standard Deviation = 0.476 ). In addition, the study makes a finding that the other investor factor on the stock choice was highly influential on the retail trader’s investment decisions. The findings of this study are in support with Shiller (2000) who asserted that in everyday life we have learned that when a large group of people is unanimous in its judgments they are certainly right. The finding indicates that people are influenced by their social environment and they are often pressured to conform e.g. lifestyle and fashion is forms of herd behavior that people are always pressured to conform to or copy.

The study makes a finding that, market behavioral factors, notably; stock trends, market information, past experience, Skills and knowledge, high performing stocks, company customer preference and information access wield a surmountable influence on the possibility of retail traders settling on investment decisions. The findings are in agreement that across situations and cultures, psychologists have established that humans employ such social comparisons to inform their beliefs and decisions even when it contradicts facts or their better judgment, Gounaris&Prout (2009). The findings support that, people of same age, gender, experience, education and peer may exhibit similar pattern of making investment decisions generally.

The study makes a finding that the most significant effect of behavioral factors is the cautionary approach gained by retail traders on price fluctuations. The findings are in agreement with Chandran (2008) who explained that individual investors suffer from heuristics such as representativeness, overconfidence and anchoring, cognitive dissonance, greed and fear, loss and regret aversion and mental accounting within the prospect theory all influence investor’s perception of risk and subsequently his decision making.

The study makes a finding that, the retail traders would consider stocks past performance across different periods for instance its performance under pressure and when at its highest peak value. The findings support Kimani (2011) who explained that the behavioral factors that influence individual investors’ choices of securities at Nairobi Securities Exchanges are five behavioral factors which include; Herding, Anchoring, overconfidence, Market and Prospect.
The study findings support Ngode (2012) who explained that there are behavioral biases in mutual fund choices by investors in Kenya.

The study makes a finding that the stocks that demonstrate stability will more likely to attack attention from stock traders. The findings are in agreement with Glaser and Weber (2003), who explained that investors who think that they are above average in terms of investment skills or past performance trade more. The findings support their argument that present a psychological foundation for the differences of opinion explanation of high levels of trading volume. Furthermore, in their way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena drive economic behavior.

5.3.2 What are the effects of behavioral factors on the Investment performance of retail traders?

The study makes a finding that the other investor factors in relation to their reaction to stocks at the market wield a significant influence on trader’s investment decisions. The study makes a finding that the most significant effect of investor behavioral factor is the fluctuation of stock process (Mean= 5.35, Standard Deviation = 0.479). The study makes a finding that the other investor factor on the stock choice was highly influential on the retail trader’s investment decisions, recording an average mean of 4.76. The finding in this study support the observations by Raines & Leather (2011) who explained that the tendency to make numerical predictions of values of securities that is representative of the descriptions of the companies but ignoring the reliability of those descriptions results in overreliance on stereotypes and the underweighting of base rate information.

The study makes a finding that, other investor choice on stock volume influenced the retail investors decisions on stock investors decisions. The findings in the study are in agreement with Kahneman&Tversky (1974) who explained that people have a tendency to categorize events as typical representative of a well-known other peoples in different classes and then, in making probability estimates to overstress the importance of such categorization disregarding evidence of the underlying probabilities. 

The study makes a finding that experienced traders strongly influenced retail traders, as their knowledge on markets and approach to investments helps inexperienced traders to grasp on
some fundamentals. The findings agree with Doukas & Petmezas (2005) who explained that for self-attribute hypothesis in the market for corporate control. The findings support Johnson et al. (2002) who observed that people tend to show excessive confidence about their own judgments. Overconfidence can lead to illusion of control. The findings support the studies by Pompian (2012) who opined that illusion of control bias is a bias in which people tend to believe that they can control or influence outcomes when, in fact, they cannot. A review by the author indicated that choices, task familiarity, competition and active involvement can all inflate confidence and generate such illusions. This may lead investors to either trade more than is prudent or inadequately diversify portfolios, for instance, because of familiarity due to having worked in the company. Another manifestation of overconfidence is self-attribute bias.

The study makes a finding that market behavioral factors enables the retail traders anticipate possible outcomes in market trading day, whether good or bad. The study makes a finding that, the behavioral factors enhanced the ability of the trader figure out and forecast the likely future process of stocks by carefully observing the prevailing market trends on the performance of representative sports. The findings of this study support Kahneman and Tversky (1979), who observed that people frame and value decisions involving uncertainty by looking at choices in terms of potential gains or losses in relation to a specific reference point which is often the purchase price; and that investors are risk averse for gains and risk lovers for losses. The findings support that emotional factors of loss and regret aversion will determine the decision on how, when and where to invest. The findings agree with Waweru et al (2008) that price changes, market information, past trends of securities, customer preferences and fundamentals of underlying securities are market factors that influence decision making of investors.

5.4 Conclusion

5.4.1 Do the market behavioral factors have an affect investment performance?

The study concludes that there is a strong positive correlation between market behavioral factors and investment performance ($p = 0.000$, $r = 0.701$, $r^2 = 0.49$). The study therefore concludes that stock market fundamentals is plays a big role in a retail investor’s eventual decision to invest on a particular stock. The study deduces that the stock trader makes a comparative analysis on the all the critical factors that have direct correlation between the
performance potential of a stock and the prevailing market condition such as market liquidity and the stability of the macroeconomic environment. The study concludes that traditional investors with a successful portfolio would have a much calm reaction to stock prices fluctuations. The study concludes that inexperienced traders are more likely to seek investment advice from friends and relatives whereas the experienced traders would rely with market fundamental factors and information on particular stock. The study concludes that, there is direct correlation between behavioral factors and the returns on stock investments. The study concludes that, the market behavioral factors namely; stock trends, market information, past experience, Skills and knowledge, high performing stocks, company customer preference and information access have a strong influence on investor’s decision on settling with particular stocks.

5.4.2 Do Investor Decisions impact on the investment performance?

The study concludes that there exist a significant statistical association between investor decisions and investment performance (p = 0.000). The study concludes that investor decisions wield a significant influence on the retail investor’s investment decisions. The study concludes that there exist correlation between other investor factors and the success of particular stocks investments. The approaches which other investors take on handling stocks at particular period of time for instance during instances of extreme volatility and instability in the macroeconomic factors offers a valuable insight for upcoming and inexperienced retail traders. The study concludes that stock choice type that other investors make, wielded the most significant influence on retail investors decisions to invest in a particular stocks. The study concludes that, other investor factors notably; stock volume choices, reactions to market fluctuations and trading strategies on buying and selling of shares significantly influenced the retail investor’s choices.

5.4.3 What is the effect of behavioral factors on investment performance?

The study concludes that there exists a strong positive correlation between investor behavioral factors and investment performance (p=0.000, r = 0.610, r² = 0.3721). The study concludes that reaction to price fluctuations was the most influential outcome of investment performance. The retail trader’s are faced with price determinants in a large wide scale as compared to previous experiences. The study concludes that, stocks that have shown consistent price stability and
positive growth have influence in investment decisions. The study concludes that, investors are more receptive to behavioral factors which enable them to have a better understanding and anticipate on possible daily market outcomes, empowers them to utilize trend analysis in determining the stock viability and enhances their capacity to make forecast on the potential of particular stocks. The study makes a conclusion that, some of the common effects of behavioral factors on investment decisions include; portfolio separation and handling, determinate perceptive on stock holding and selling, risk awareness and enhances individual trading capacity.

5.5 Recommendation
5.5.1 Recommendations for improvement
5.5.1.1 Behavioral factors influencing retail investors
Education should to be vested in retail investors since this would overcome unfavourable investment outcomes caused by behavioural biases. In order to manage the excesses of behavioural influences to investment decision making, training programs that create investor awareness and ability to identify and guard against behavioural biases that lead to bad investment choices should be offered to both potential and existing retail investors. There is need for financial management knowledge for retail investors such that their capacities in managing funds are enhanced. Therefore, research should be conducted on how financial capability program could be designed and implemented in suitable and cost effective manners that enhance the value of the investors.

Furthermore retail investors should seek the advice of stock brokers/fund managers to advice them accordingly in terms of performance of a specific security in which an investor would wish to invest in. the implication is that such brokers/fund managers have the information of the market and are aware of the movers and shakers of securities and therefore provide their advice at a fee. There should exist measure to curb the behaviours of such brokers/fund managers in trying to exploit naïve investors by misadvising them or even charging exorbitant fee in the name of information provision. This is to say that there should be some kind of regulation by the government or even say the governing body.
5.5.1.2 How do behavioral factors influence retail investors decisions?
Based on the findings of this research it is recommended that the individual investors need to analysis the investment factors carefully using the reasonable business knowledge before making an investment decision. The investors should also be able to interpret the market and economic indicators of various industries and firms in the market since they influence the performance of the share on the stock exchange. Investors do also need to be open-minded while making their investment decisions and desist from holding onto the past notions with hindsight that they may reflect the future due to the fact that the stock exchange is a dynamic market with new developments coming in so quickly. They should evaluate all the variables in the environment instead of considering only one variable. Further to minimize information asymmetry which is the biggest contributor to investor apathy that leads them to utilizing heuristics in making investment decisions, investment information should be disseminated by the NSE in a form comprehensible to common retail investors to aid them in making better informed investment decisions.

5.5.1.3 How do behavioral factors influence investment performance of retail investors?
The findings show that overconfidence has positive impacts on the investment performance. Therefore, retail investors at the NSE should be overconfident at an acceptable level to utilize their skills and knowledge in certain circumstances to improve the investment results. In the uncertainty, the overconfidence can be useful for the investors to do difficult tasks and help them to forecast the future trends. Kenyans are very reactive and tend to be under-confident in some cases, so that this recommendation seems to be suitable for Kenyan investors to improve their investment performance. However, overconfident traders tend to underestimate the associated risks of active stock investment, which can affect badly to their investment result. Therefore, an acceptable advice for the investors is that overconfidence is great for their investment if they can use it in the clever and suitable ways.

Besides overconfidence, herding also has positive impact on investment performance. Retail investors can establish the forums to support each other in finding reliable information of stock market. The cooperation of a crowd of investors can help them limit the risks and increase the chances to have good investment results. In contrast to overconfidence and herding, the findings suggest that prospect factors (loss aversion, regret aversion, and mental accounting) impact negatively to investment performance. Thus retail investors should do a thorough
analysis before making investment decisions, but should not care too much about the prior loss for their later investment decisions. This can limit the good chances of investment and impact badly the psychology of the investors and lead to bad investment performance.

5.5.2 Recommendations for Further Studies
This study focused largely on the influence of behavioral factors that inform the retail trader’s choices on investments in the securities exchange and its impact on the investment performance. The study recommends that the future researchers should address the triggers in stock fluctuations and how they inform decisions on investment. Future researchers should address the topic of the utilization of technical reports by listed companies on their performance in securities exchange. In addition to technical reports influence on stock performance, there should be studies directed at the importance of company information availability on its stock performance at the Securities exchange.

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APPENDIX I

Cover Letter

Filbert C. Chami
United States International University
P.O.BOX 14634-00800
NAIROBI

Dear Respondent,

REF: REQUEST FOR YOUR PARTICIPATION

This structured questionnaire is for collecting data on the behavioral finance factors affecting investment decisions by retail investors at the Nairobi Securities exchange. You are kindly requested to provide the required data in the questionnaire. The process will take you few minutes. The information that you provide will remain confidential and is sought exclusively for the completion of an MBA research project.

Thank you very much for taking the time to complete this survey. Your input will go a long way in understanding the fundamental financial behavioral factors that wield influence on retail investor’s choices for stocks investments. Your input will also help in identifying important reforms in form of policy and legislation at the capital markets in order to create friendly environment that will enable the individual investors make better investment choices.

If you would like to receive a copy of this report, please indicate so by writing your email address on the back of the questionnaire.

Kind Regards,

Filbert Calist Chami

APPENDIX II
Schedule of Registered Securities Brokerages and Investment Banks

1. ABC Capital
2. African Alliance Kenya Investment Bank
3. Afrika Investment Bank
4. ApexAfrica Capital
5. CBA Capital
6. Discount Securities (Under Statutory management)
7. Dyer & Blair Investment Bank
8. Equity Investment Bank
9. Faida Investment Bank
10. Francis Drummond & Company
11. Genghis Capital
12. Kestrel Capital
13. Kingdom Securities
14. NIC Securities
15. Old Mutual Securities
16. Renaissance Capital (Kenya)
17. SBG Securities
18. Standard Investment Bank
19. Sterling Capital
20. Suntra Investment Bank